

CHUKA



UNIVERSITY

## UNIVERSITY EXAMINATIONS

### EXAMINATION FOR THE AWARD OF DEGREE OF BACHELOR OF SCIENCE IN BIOMEDICAL TECHNOLOGY

**BMET 424: CLINICAL PATHOLOGY**

**STREAMS:**

**TIME: 2 HOURS**

**DAY/DATE: THURSDAY 11/4/2024**

**2.30 P.M. –4.30 P.M.**

**INSTRUCTIONS: Answer question one and any other two questions**

#### Question 1 (Compulsory) (30 marks)

- (a) Because of the large number of samples which are processed by most clinical biochemistry laboratories, every step needs to be taken to avoid errors. Regrettably, errors do occur. Describe the classification of these errors according to the error source. (6 marks)
- (b) Explain TWO forms of disease screening. (4 marks)
- (c) Explain the difference between clinical sensitivity and specificity. (4 marks)
- (d) Explain the difference and application of blood serum and plasma. (6 marks)
- (e) Briefly describe urea breath test. (5 marks)
- (f) Highlight any FIVE groups that are at risk of developing thyropathy. (5 marks)

#### Question 2 (20 marks)

- (a) Explain the application of white blood cell indices in clinical diagnosis of diseases. (10 marks)
- (b) Discuss the basic types and clinical application of various urine samples. (10 marks)

#### Question 3 (20 marks)

- (a) Discuss various groups of biochemical tests done to evaluate integrity of the liver. (10 marks)
- (b) Explain the diagnosis of acute and chronic pancreatitis (10 marks)

**Question 4 (20 marks)**

(a) Describe THREE most common tests done for plasma lipid abnormalities. (10 marks)

(b) Discuss the tests done to evaluate absorption of carbohydrate, fats, amino acids and bile acids. (10 marks)

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